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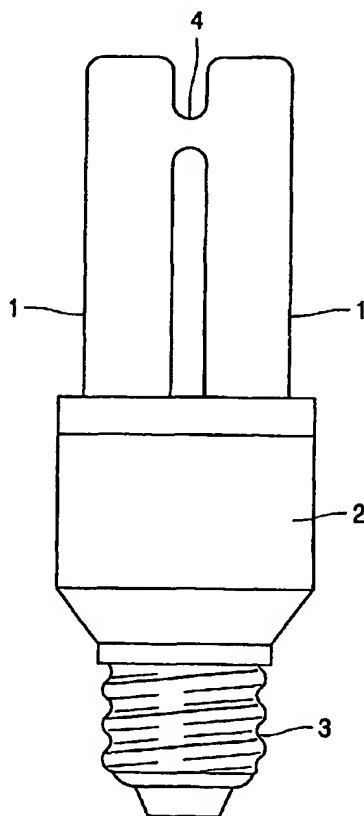
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[Continued on next page]

(54) Title: AN ELECTRIC LAMP COMPRISING A GLAS COMPONENT



(57) Abstract: The electric lamp has a glass component with a composition which, according to the invention, is substantially free of PbO and has the following constituents: 55-70 wt.% SiO₂, <0.1 weight% Al₂O₃, 0.5-4 weight% Li₂O, 0.5-3 weight% Na₂O, 10-15 wt.% K₂O, 0-3 wt.% MgO, 0-4 wt.% CaO, 0.5-5 wt.% SrO, 7-10 wt.% BaO. Preferably, the composition of the glass comprises: 65-70 wt.% SiO₂, 1.4-2.2 wt.% Li₂O, 1.5-2.5 wt.% Na₂O, 11-12.3 wt.% K₂O, 1.8-2.6 wt.% MgO, 2.5-5 wt.% CaO, 2-3.5 wt.% SrO, 8-9.5 wt.% BaO. The glass is preferably used as a CFL-envelope glass or as glass for a stem. The electric lamp made with a glass according to the invention has favorable fusion and processing properties, in particular a liquidus temperature $T_{liq} \leq 800^{\circ}\text{C}$.



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C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| A | US 5 925 582 A (FILMER BARTHOLOMEUS ET AL) 20 July 1999 (1999-07-20) cited in the application the whole document ----- | 1-11 |

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|---|---|---------------------|----|----------------------------|---------------------|
| US 5925582 | A | 20-07-1999 | CN | 1196713 A ,B | 21-10-1998 |
| | | | DE | 69701439 D1 | 20-04-2000 |
| | | | DE | 69701439 T2 | 14-09-2000 |
| | | | EP | 0842127 A1 | 20-05-1998 |
| | | | WO | 9743223 A1 | 20-11-1997 |
| | | | JP | 11509514 T | 24-08-1999 |
| <hr/> | | | | | |